## BRIEF DESCRIPTION OF DRAWINGS

[0018] These and other objects, features and advantages of the present invention will become apparent to those skilled in the art upon consideration of the following description of the preferred embodiments of the present invention taken in conjunction with the accompanying drawings, in which:

[0019] **FIG. 1** shows a conventional flat touchpad;

[0020] **FIG. 2** shows a conventional curved touchpad;

[0021] **FIG. 3** is a perspective diagram showing a touchpad according to a first embodiment of the present invention;

[0022] **FIG. 4** is a perspective diagram showing a touchpad according to a second embodiment of the present invention;

[0023] **FIG. 5** is a perspective diagram showing a touchpad according to a third embodiment of the present invention;

[0024] **FIG. 6** shows a cross-sectional view of the touchpad illustrated in **FIG. 3**;

[0025] **FIG. 7** shows a cross-sectional view of the touchpad illustrated in **FIG. 4**;

[0026] **FIG. 8** shows a cross-sectional view of the touchpad illustrated in **FIG. 5**;

[0027] **FIG. 9** is a diagram showing the pressing of a key on the touchpad illustrated in **FIG. 3**;

[0028] **FIG. 10** is a diagram showing the pressing of a key on the touchpad illustrated in **FIG. 4**;

[0029] **FIG. 11** is a diagram showing the pressing of a key on the touchpad illustrated in **FIG. 5**;

[0030] **FIG. 12** is a cross-sectional view showing a touchpad according to a fourth embodiment of the present invention;

[0031] **FIG. 13** is a cross-sectional view showing a touchpad according to a fifth embodiment of the present invention;

[0032] **FIG. 14** is a cross-sectional view showing a touchpad according to a sixth embodiment of the present invention;

[0033] **FIG. 15** is a diagram showing the pressing of a key on the touchpad illustrated in **FIG. 12**;

[0034] **FIG. 16** is a diagram showing the pressing of a key on the touchpad illustrated in **FIG. 13**;

[0035] **FIG. 17** is a diagram showing the pressing of a key on the touchpad illustrated in **FIG. 14**;

[0036] **FIG. 18** shows a top view of a touchpad according to the present invention;

[0037] **FIG. 19** shows a curved touchpad according to one embodiment of the present invention;

[0038] **FIG. 20** is a diagram showing the relationship between the amount of deformation of a cover and the variance in capacitance generated by a sensor;

[0039] **FIG. 21** is a diagram showing the gluing of the covering to a sensor;

[0040] **FIG. 22** is a diagram showing the screwing of the covering onto a sensor; and

[0041] **FIG. 23** is a diagram showing the insertion of the covering into a sensor.

## DETAILED DESCRIPTION OF THE INVENTION

[0042] FIGS. **3** to **5** are perspective diagrams showing three embodiments of touchpads. In the touchpad illustrated in **FIG. 3**, a sensor **10** is provided thereon with a cover **14** having twelve key regions **16** thereon, each key region **16** having a projecting structure thereon with a thickness D. In the touchpad illustrated in **FIG. 4**, a cover **18** provided over a sensor **10** is provided with twelve key regions **20**, each having a recessed structure thereon, and is provided with a thickness D at the center of this recessed structure. In the touchpad illustrated in **FIG. 5**, over a sensor **10**, there is provided with a cover **22** with a thickness D, having twelve key regions **24** presented as a flat structure thereon. The key region herein is referred to as a region on the cover, used as a key for a user to operate, corresponding to a region of the sensor desirably achieving the function of virtual key. When the pressing of the key region provided by an object is detected by the sensor, a key signal is generated accordingly.

[0043] FIGS. **6** to **8** are cross-sectional views of the touchpads illustrated in FIGS. **3** to **5**. The covers **14**, **18**, and **22** are all deformable insulators, which may deform under the compression of external force. Referring to FIGS. **9** to **11**, provided that the key region is pressed by a finger, the cover **14**, **18**, **22** may deform in the pressed key region **26**, **28**, **30**, correspondingly, in such a way that the finger may approach the sensor **10**, and the key signal may be then generated. The cover **14**, **18**, **22** may restore when the finger is released, as illustrated in FIGS. **6** to **8**. The sensation of pressing and releasing the key may be provided for a user, owing to the feedback sensation generated from the deformation of the cover **14**, **18**, **22** to the user. In the meanwhile, the action of pressing and releasing the key provided by the user may be received by the sensor **10**, equally due to this deformation.

[0044] FIGS. **12** to **14** are cross-sectional views of touchpads according to other embodiments of the present invention. Between the sensor **10** and cover **14**, there is provided with a support member **32** with recesses **34**, each having a thickness D, underneath the key regions **16**, as shown in **FIG. 12**. Between the sensor **10** and cover **18**, there is provided with a support member **32** with recesses **34**, each having a thickness D, underneath the key regions **20**, as shown in **FIG. 13**. Similarly, between the sensor **10** and covering **22**, there is provided with a support member **32** with recesses **34**, each having a thickness D, underneath the key regions **24**, as shown in **FIG. 14**. As a finger presses the key region, as shown in FIGS. **15** to **17**, the cover **14**, **18**, and **22** may deform in the pressed key region **36**, **38**, and **40** so as to stuff into the recess **34**, in such a way that the finger may be allowed to approach the sensor, and the key signal may be generated accordingly. As the finger releases, the covers **14**, **18**, and **22** may restore, as shown in FIGS. **12** to **14**. In these three embodiments, the support member is an insulator, while the covers **14**, **18**, and **22** may be an insulator or a conductor. In some embodiments, the support member is thin without recess underneath the key region, simply providing the effect in protecting the sensor.